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ABSTRACT

A formative evaluation of curricular effectiveness of the General Education (GE) Program at the University of Montevallo, an Alabama state-supported liberal arts institution, is described. The GE Program is divided into 11 core areas. The American College Testing Program's College Outcomes Measures Program (COMP) objective test--a test of general educational outcomes--has been administered each year since 1985 to freshmen. In the spring of 1989, the test was administered to the first class of seniors graduated under the revised GE curriculum. Using test results, GE goals were established and a questionnaire was distributed by a GE Committee to all 75 faculty members teaching approved GE courses; 61 responses were received, representing 81% of those surveyed. There were peculiarities in the sample that preclude a straightforward analysis of overall results. Nevertheless, the following implications were identified: (1) the GE Committee should develop a set of expected outcomes related to GE goals to facilitate both teaching/learning success and more accurate evaluation; (2) faculty should discuss their goals and expected outcomes to clarify the emphasis of the goals in their courses; (3) the pilot study questionnaire should be revised; (4) the goals matrix based on the COMP outcomes should be revised using clusters identified as related to specific goals and outcomes; and (5) item cluster analysis should be performed on senior COMP results. The goals matrix and other ancillary survey materials are appended. (TJH)

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Exploring Curricular Implications of Evaluation Results in Higher Education

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We thank the University of Montevallo General Education Committee and other faculty members who assisted in the local validation study of the COMP test. We also thank the Evaluation and Assessment Laboratory staff for their assistance in developing the evaluation model and conducting the faculty survey used to relate course content to general education and COMP goals.

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Evaluation of institutional effectiveness, especially the assessment of college student outcomes, has become a major concern in higher education as evidenced by books (Bennet, undated; Boyer, Ewell, Finney & Mingle, 1987; Ewell, 1984; NIE Study Group on the Conditions of Excellence in American Higher Education, 1984; Nichols, 1989), national and regional conferences on the topic, new standards for accreditation (Boyer et al., 1987), and increasing emphasis in professional organizations. The AAHE Assessment Forum has sponsored four national conferences in the last five years. The Southern Association for Colleges and Schools implemented criteria for institutional effectiveness as a part of its accreditation standards in 1988, as examples. According to a survey conducted in the spring of 1988 (El-Khawas, 1988), approximately 50% of the nation's campuses had some form of assessment activity underway. However, Hutchings (1989) asserts, "unless assessment touches down at the classroom level, where teachers and students come together, we should not bother" (p. 8).

The current move to assess college outcomes is an extension of typical academic procedures - of establishing objectives, defining criteria to judge performance, to develop methods to assess that performance, and ultimately to use the results of those methods. This process provides feedback to learners and teachers as a means of judging mastery and success in teaching. According to Baird (1988), the most important use of general assessment of outcomes is that comprehensive assessments can lead to healthy discussion of overarching academic goals, curricular requirements, and the "process as well as the content of learning" (p. 42). Peter Ewell (1987) agrees that the challenge of assessment is to identify better ways of using the resulting information in institutional and curricular decisions.

Hutchings (1989) asserts that the emphasis in assessment programs should be to connect assessment to teaching and learning. The questions to be answered include: Does assessment affect classroom practice? Are faculty exploring different, more effective approaches to teaching? Has the interchange between faculty and students been altered?

Based on interviews with faculty at institutions with commitments to assessment, Hutchings concluded that assessment procedures have helped faculty rethink the purposes and expectations of education. In addition, the focus on "larger outcomes" has caused faculty to pursue the answers with their colleagues all across campus. These processes have lead to greater institutional as well as faculty clarity about outcomes.

As part of their effort to measure institutional effectiveness, many universities administer standardized assessment instruments. Two such instruments designed to assess general education outcomes are the American College Testing (ACT) Program's College Outcomes Measures Program (COMP) (ACT, 1984) and the Educational Testing Service's (ETS) Academic Profile (Altman, 1987). How a college or university might determine if such instruments address its own general education goals has been described by McLean and Rogers

and their colleagues (Rogers, Bullard, Ernest, Bolland, & McLean, 1988; McLean, Bolland, Rogers, Ernest, & Bullard, 1989).

But just relating test goals to curriculum goals may not be enough. One purpose for measuring outcomes is formative evaluation--the identification of areas that need improvement. If desired outcomes are not being achieved, changes might be needed in the curriculum, in the co-curricular program, in student selection and/or placement, or in faculty development to better meet desired goals. This paper addresses potential curricular change by describing an effort to relate results on a test of general education outcomes (COMP objective test) to curricular areas and specific courses which focus on particular general education goals.

What do the results of general education achievement tests tell us about student learning and where that learning occurred? If we can identify areas where students are not achieving university goals, how can we determine what curricular changes might increase student achievement? To identify areas for curricular improvement and to determine how to effect needed improvement, the university must be able to relate the results of outcomes measures to specific curricular areas. This can pose a serious problem with general education outcomes, where relevant content and skills may be scattered throughout the curriculum.

Several methods could be used to relate general education outcomes to specific curricular areas, including:

> Ask faculty to indicate which of the general education goals they address in their courses.
>
> Ask students to indicate which of the general education goals are addressed in their courses.
>
> Analyze syllabi and course tests to see where course content seems relevant to specific goals.
>
> Look at the sequences or patterns of courses taken by students with different assessment results.
>
> Analyze the items passed/failed by students who score well/poorly in certain areas.

The University of Montevallo (UM), a small, state-supported liberal arts university, developed general education goals (see Appendix A) and instituted its General Education (GE) Program in 1985 (University of Montevallo Core Curriculum Committee, 1983). From the beginning, we planned to conduct formative evaluation to determine how well we were achieving our GE goals and where the curriculum might need modification. We have administered the COMP objective test every year since 1985 to freshmen, and in the spring of 1989 we administered it to the first class of seniors who graduated under our revised general education curriculum. It was our hope that we could determine, from the test results, where

curricular improvement was needed and even what specific courses might be modified to better meet our goals.

We began by developing a matrix to show the relationship between our General Education program goals and the educational goals assessed by the COMP exam (Rogers, Bolland, Moon, & McLean, 1986; Rogers et al., 1988; McLean et al., 1989). The matrix includes columns relating the General Education goal statements, the COMP goal statements, and the item number of each COMP exam question that appears to be related to each General Education goal. A matrix of COMP items related to COMP goals provided by ACT (Forrest & Steele, 1982) was extremely helpful in this phase of our work. Through this process we identified which of our goals are similar to those measured by the COMP objective test and which are not covered adequately by that test . Six of the ten UM General Education goals (Goals 1 through 5 and Goal 10) appeared from this analysis to be very close to COMP goals, although part of one of these UM goals is not addressed by COMP (part b. of Goal 3, "to understand the history of ideas").

Having identified the overlapping goals, we next focused on determining what GE goals faculty report that they emphasize in each of the approved general education (Core) courses. If we could do this, then we could relate scores on the COMP test (or at least scores on specific COMP item groups) to the curriculum area and/or courses that are addressing these goals. This would also be useful in determining the instructional validity of the COMP test, as reported by McLean and his colleagues (McLean, et al, 1989).

Toward this end, the staff of the Evaluation and Assessment Laboratory (EAL) of the University of Alabama, in consultation with the Evaluation Subcommittee of the UM General Education Committee, developed a faculty questionnaire to assess the extent to which the UM General Education goals and the COMP test goals were being addressed in courses (Rogers & McLean, 1986; Rogers et al., 1986). Questions were developed directly from UM and COMP goal statements, using the CORE/COMP matrix (Appendix B). Questionnaire items were developed to follow the wording of the goals as nearly as possible, with modifications made to improve clarity, avoid duplication, and make each item ask only one question. Thus, for example, GE Goal 1 is covered by six questionnaire items, and questionnaire item 19 addresses GE Goal 3.a. and four related COMP goals. Column 3 of the matrix shows the questions from the faculty survey questionnaire that address each goal. Faculty were asked to indicate whether each statement indicated outcomes which were a "major emphasis," "minor emphasis," or "no emphasis" in their courses.

This questionnaire was distributed by the General Education Committee to all faculty at UM who were currently teaching approved General Education courses (N=75). If a faculty member was teaching more than one approved course, a questionnaire was sent for each such course. Multiple sections of the same course taught by the same faculty member were treated as a single course, however. Sixty-one responses were returned. This represented an 81%

return rate and at least one faculty response for every distinct General Education course taught at that time. For many courses responses were received from all of the faculty teaching the course.

The UM General Education curriculum is divided into twelve Core areas. In some Core areas (University Experience, Integrated Arts, Oral Communication, World Literature, Western Civilization, Math), one specific course or two-course sequence is designed to cover the area. In the other Core areas, any of a variety of courses may be selected to meet "a distribution requirement." A breakdown of the number of responses from faculty in each Core area is given in Table 1.

Table 1
Number of Responses by Core Areas

Core Area	*# responding*
University Experience (UE)	1
Integrated Arts (IA)	1
Foundations of Writing (FW)	6
Oral Communication (OC)	1
Math (MA)	2
World Civilization (WC)	2
Science (SCI)	12
Human Behavior and Inquiry (HBI)	2
Computer Science (CS)	3
Institutions and Issues (II)	9
Health and Physical Education (HP)	22
Total	**61**

In spite of the high return rate, there were relatively few returns from Foundations of Writing courses (only three of eight faculty teaching Foundations of Writing responded), although writing has a heavy emphasis in the GE program. Because of the large number of one-hour PE course options offered and a high rate of return from that department, almost one-third of all respondents were from Health and Physical Education but only four hours of the 42-hour Core Curriculum are from this area. It also should be noted that this survey was conducted quite early in the implementation of the General Education curriculum and not all

courses which would eventually make up the Core were in place at that time. For example, the sophomore level literature courses were not yet being taught in their new format, and many courses later approved for Institutions and Issues credit had not been developed. Thus this study should be taken as indicative of **how** the process can be used rather than as a final indication of the goal emphasis for courses in this program.

Results

As previously mentioned, there were peculiarities in the sample which preclude a straightforward analysis of the overall results. For example, a combination of selective under-response by English faculty and an inherent disproportion of faculty teaching courses in physical education to the weighting of physical education in the Core make the overall percentages of responses to individual goals misleading (Bolland & Rogers, 1986). More detailed breakdowns of goals and items by Core areas and specific courses give a clearer picture of the actual emphasis on goals within courses.

There were a few questions that were not answered by all faculty members responding. Some of these were apparently accidental omissions. In other cases (for example, questions 3, 38, and 39), one or more respondents expressed confusion over what the question was asking. In addition, five respondents did not answer any of the questions on the last page of the questionnaire--they apparently did not turn the page. If further research is done with this questionnaire, modifications will be needed to clarify the ambiguities and call attention more forcefully to the last page.

There were a few errors and omissions in responses to demographic questions (e.g., whether or not the course was classified as Institutions and Issues, etc.), but these were corrected before the data were tabulated. Having a person responsible for "cleaning" the answer sheets who was intimately familiar with the Core courses at UM and their classification thus improved the accuracy of the data.

Reliability and validity. A review of questionnaires where a single faculty member responded to objectives for more than one course indicated that the questionnaires were answered differently for different courses, supporting the curricular validity of the results. Individual response protocols were scanned to see if anyone answered all 1s, all 2s, or all 3s (indicating all major emphasis, all minor emphasis, or all not relevant, respectively), or if anyone failed to give any 1s or 3s. No such responses patterns were noted, although one respondent did fail to mark any item as a "Major Emphasis," and another failed to mark any "Minor Emphasis." We do not know whether this was (a) a response bias; (b) a failure to understand the intended meaning of "Major" and "Minor" Emphasis; or (c) an indication that no goal did receive major (or minor) emphasis in the respondent's course. If the questionnaire is used

again, consideration should be given to defining the response categories more fully, and perhaps going to four or five alternatives instead of only three.

Since the questionnaire purposefully covers heterogeneous goals and widely differing courses, most of the usual measures of reliability are inappropriate. One indication of the reliability of the questionnaire would be a fair amount of congruency among multiple respondents teaching the same course. Although this was only a pilot study and thus did not involve all of the teachers who might teach a given course, responses were received for eight courses taught by two different teachers and for three additional courses taught by three teachers each. There was substantial agreement between these teachers of the same courses regarding the amount of emphasis given to each goal statement. Tables showing the response patterns among multiple teachers of the same courses are shown in Appendix C. Only in Psychology 101 (8%), Sociology 230 (15%), and PE 128 (10%) were as many as four items answered in opposite directions. Overall, these results support both the reliability of the questionnaire and the agreement on goals among multiple teachers of the same courses. The small differences that do exist possibly reflect real differences in emphases of certain goals, or possibly indicate differing interpretations of the questions. As a follow-up, it would be helpful for teachers of the same courses to go over their responses and discuss whether their differences reflect intended or unintended differences in emphasis, or just differences in question interpretation, and to provide feedback on this to the General Education Committee.

As an indicator of validity of the questionnaire, overall agreement between some of the goals and the obvious courses in which these were expected to be emphasized (or <u>not</u> emphasized) was checked. The expected agreements were present. For example, understanding, interpreting, and transmitting mathematical materials was reported as a major emphasis in math courses, but not in English or physical education; transmitting written information was reported as a major emphasis in Foundations of Writing, as well as a number of other courses; developing personal values through studying the past in relationship to the present and future was an emphasis in history courses, but not in science or physical education; analyzing human development and behavior was a major emphasis in psychology, but not in science and math courses.

<u>Questionnaire results.</u> Responses to questionnaire items were tabulated in several ways to provide multi-level interpretation of the results. First the items were grouped by goals, and tables prepared to show total faculty response to each item related to a goal (See Appendix D). The results indicate that every one of the General Education goals is indeed being addressed in many courses. Because of the diversity of courses and the disproportionate representation of physical education courses, some of the goals do not at first appear to be emphasized in as high a percentage of courses as might be expected. This level of tabulated results must therefore be interpreted with caution. A less ambiguous picture of the results may be seen in the more detailed breakdowns.

Next, courses were grouped into Core areas and items organized within areas by Goals (See Appendix D). These tables provide the most complete information on Goal emphasis by area of instruction. And, for those Core areas where only one course is available to meet the Core requirement, they provide information on specific course emphasis on a goal.

Finally, when one of several courses can be selected to meet a Core area requirement (i.e., distribution requirements), responses were tabulated to show the extent to which each individual course covered each Goal (See Appendix D). Once again, small frequencies indicate the need for care in interpretation. These tables, along with the ones in the previous group where only a particular course could be selected to meet a requirement, provide the most detailed level of analysis. They will indicate to the General Education Committee the degree to which individual courses approved to satisfy General Education requirements are in fact addressing related goals, at least so far as the instructors of these courses report. Later studies might address these same questions to students to see the extent they view the goals as being emphasized in the courses.

Results from these analyses allowed us to add a column to the Core/COMP matrix to show which courses appear to address each General Education goal. On the matrix (Appendix B), major and minor emphases are displayed by the general education goal areas rather than by individual courses to facilitate analysis.

When we tried to relate specific courses to goals, we found the goal statements to be so broad that we were not able to focus courses that related to all aspects of a goal. For example, Goal 1.a. (already broken into a sub-part of an even broader Goal), is "To develop the ability to use and interpret language in written and spoken forms." This encompasses both written and oral language, and also includes understanding/interpreting language as well as transmitting it. The Oral Communications course focuses on oral transmission--and to a lesser extent understanding and use of oral language--but does not focus on writing at all (whether it <u>should</u> include writing is another question). On the other hand, Foundations of Writing courses focus on written rather than oral communication, and more on transmission than on use. To target more precisely the knowledge and skills being taught and assessed, the goal statements need to be extended into more precise statements of expected outcomes (Nichols, 1989).

Working within the Core areas, however, we were able to identify where there was reasonable consistency across courses in the area as to what goals are being addressed. For example, II represents a summary of all courses for which responses were submitted from the Institutions and Issues component of the program. Analysis of the course emphases indicates the major and minor course emphasis in the greatest number of courses for sub-goal 1.a., using and interpreting spoken and written language; goal 2, problem solving; and goal 8, developing inner resources for lifelong learning. Major emphasis for goal area by only one course include goal 9, value of work and leisure and career opportunities, which is addressed by UE, and goal 10, recognizing prospects for change, which is addressed by II courses. Where test results help

us to determine which goals are and are not being achieved, this column of the matrix can help us determine where curricular revisions may be advisable.

Conclusions. Analysis by course indicates sufficient disparity between the responses by faculty to survey items within one goal area to warrant elaboration of the broad goal statements into more specific outcome statements. If the effectiveness measures are truly to assess outcomes that can feed back to curricular revision, the outcomes must be specified in more detail since it is difficult to relate courses to goals when there are two to six outcomes embedded in one goal (e.g., Goal 3 is assessed by survey items 15, 16, 17, 19, 23, and 31). Therefore, the following implications for the curriculum and further research seem warranted:

1. The General Education Committee should develop a set of expected outcomes related to general education goals to facilitate both teaching/learning success and more accurate evaluation procedures.

2. Faculty who teach different sections of the same course or different courses within the same general education Core area should discuss their goals and expected outcomes to clarify the emphasis on the goals in their courses.

3. The pilot study questionnaire should be revised, in accordance with more detailed statements of expected outcomes and administered to all faculty now teaching General Education courses to clarify the course emphasis on the various goals.

4. The CORE/COMP matrix should be revised/updated, preferably using the item clusters identified as related to specific UM goals/expected outcomes.

5. The COMP results for seniors should be analyzed, preferable using the item clusters from COMP identified as related to specific UM goals/expected outcomes (see McLean et al., 1989) . Difference between scores of freshmen and scores of seniors on the item clusters could clearly identify where growth in an area had taken place.

These procedures for relating goals and test results to specific curricular areas or courses could be useful to any institution undertaking assessment of outcomes of general education.

Broad faculty participation in the review and revision of the courses which comprise the general education program is needed for assessment procedures to be linked to teaching. According to Centra (1988), "faculty ... involvement in the assessment process is necessary if the results are to have maximum potential for changes in the curriculum and teaching" (p. 110).

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APPENDIX A

Statement of Purposes and Goals of the Core
Educational Program University of Montevallo

The core educational program of the University of Montevallo introduces students to a broad spectrum of knowledge and experiences designed to develop the mind, the emotions, the spirit, and the body. The purposes of the program are to enable students to participate as responsible, informed citizens in a democratic society and in the global community; to become self-educating individuals; to work creatively and effectively; and to lead satisfying personal lives.

To accomplish these purposes, the core educational program enables students to attain the following goals:

1. To develop skills in the use and interpretation of symbol systems which employ words, numbers, and visual/aural imagery; specifically,

   a. to develop the ability to use and interpret language in written and spoken forms
   b. to develop the ability to use and interpret mathematical structures
   c. to develop the ability to interpret other visual and auditory symbol systems.

2. To develop the ability to use rational processes in consideration of ideas and problems, including the ability to make judgments based upon description, analysis, and interpretation.

3. To search for and develop personal, family, and community values through a study of the past, its vitality in the present, and its relevance to the future; specifically, by enabling students

   a. to analyze human developments and behavior
   b. to understand the history of ideas
   c. to learn about political, social (family and community), economic, philosophical, and religious systems by which humanity has organized itself.

4. To develop the ability to explore and appreciate the imaginative presentation of human experience through literary, visual, performing, and other arts.

5. To become knowledgeable about the physical and biological structure of nature, the place of humanity in the natural world, and the ethical, economic, and political dimensions of humanity's impact on the environment.

6. To apply knowledge about health, nutrition, physical activity, and aesthetics to their personal lives and environments and to their communities.

7. To develop the ability to engage in effective interpersonal relationships, to understand their responsibilities in the American democratic community and in the world-wide human community, and to understand leadership roles.

8. To develop inner resources such as imagination, a sense of wonder, self-discipline, and a habit of critical inquiry so that they may engage in lifelong, self-directed learning.

9. To affirm the value of work and leisure, to become aware of the wide range of career and leisure opportunities through which they may make contributions to society and achieve personal satisfaction, and to develop the self-knowledge, the competencies, and the qualities of mind (see Goals 1-8 above) which contribute to successful employment and fruitful living.

10. To become knowledgeable about the prospects for change occurring in their lifetimes and in subsequent generations so that they may be able to adapt to new conditions and to demonstrate responsible, creative leadership in shaping a changing world.

University of Montevallo Core Curriculum Committee. (1983). A proposal to University of Montevallo faculty of a revised core educational program.

APPENDIX B
CORE-COMP MATRIX

Core Goals	COMP Goals	Faculty Survey Questions	Course Emphasis Major	Minor
1. To develop skills in the use and interpretation of symbol systems which employ words, numbers, and visual/aural imagery; specifically:				
1.a to develop the ability to use and interpret language in written and spoken forms	A. Can receive information from oral presentation, media presentations, and nonverbal cues.	1. To be able to understand, analyze, and/or interpret written or spoken language	OC HBI WC MA FW SCI UE II CS HP	
	B. Can send information via speech, media, and nonverbal presentations.	4. To be able to transmit verbal (oral and/or written) information	OC FW IA WC II CS MA UE HP SCI	
	C. Can receive information from written materials.			
	D. Can send information using written materials			
1.b. to develop the ability to use and interpret mathematical structures	E. Can receive information from numeric and graphic representations.	2. To be able to understand, analyze, and/or interpret mathematical structures (in numeric and/or graphic form)	MA	HBI SCI CS
	F. Can send information using numeric and graphic representations.	5. To be able to transmit numeric and/or graphic information		II SCI CS
1.c. to develop the ability to interpret other visual and auditory symbol systems	A. Can receive information from oral presentation, media presentations, and nonverbal sues.	3. To be able to understand, analyze and/or interpret nonmathematical, visual, or auditory symbol systems	IA	SCI OC II
	B. Can send information via speech, media, and nonverbal presentations.	6. To be able to transmit nonverbal information	SCI	IA OC

Core Goals	COMP Goals	Faculty Survey Questions	Course Emphasis Major Minor
2. To develop the ability to use rational processes in consideration of ideas and problems, including the ability to make judgments based upon description, analysis, and interpretation.	G. Can identify and define problems (objectives and constraining factors). H. Can select approaches to solve problems. I. Can generate possible solutions, hypotheses, or testable propositions. J. Can collect various forms of information ("data") regarding proposed solutions with respect to a problem and its constraints. K. Can determine the logical consistency among the information obtained, the problem as defined, and the hypotheses or solutions proposed. L. Can determine the solution to be implemented. M. Can propose or select procedures to evaluate ("confirm" the appropriateness of) the solution chosen for implementation N. Can evaluate the process by which a problem was "solved." P. Can assess a set of values for internal consistency. Q. Can identify the major influence in the development of values in individuals. R. Can analyze rationales for value choices. S. Can infer personal values from behavior. T. Can analyze the implications of decisions made on the basis of values.	7. To be able to analyze problems (identify, define, select approaches) 8. To be able to select or create solutions to problems (e.g., generate hypotheses, collect information, analyze information, evaluate probable effects of solutions) 9. To be able to evaluate problem-solving processes 10. To develop the ability to make rational judgments based on description, analysis, and interpretation of ideas and	**FW II** WC CS **SCI MA** **HP** **OC FW** WC **HBI** **II SCI** CS **MA HP** **OC FW** SCI II **MA** HBI CS HP **IA OC** WC II **FW SCI** HBI CS **MA HP** UE

Core Goals	COMP Goals	Faculty Survey Questions	Course Emphasis Major	Minor
3. To search for and develop personal, family, and community values through a study of the past, its vitality in the present, and its relevance to the future; specifically, by enabling students				
3.a. to analyze human development and behavior	Q. Can identify the major influence in the development of values in individuals. S. Can infer personal values from behavior. T. Can analyze the implications of decisions made on the basis of values. 3. Can explain the reciprocal relationship between social institutions and individuals.	19. To analyze human development and behavior	WC HBI	FW II
3.b. to understand the history of ideas		31. To understand the history of ideas	WC	IA II HBI SCI CS

Core Goals	COMP Goals	Faculty Survey Questions	Course Emphasis Major	Minor
3.c. to learn about political, social (family and community), economic, philosophical, and religious systems by which humanity has organized itself.	O. Can identify the major values, and issues usually faced, in daily adult life in one's own and other cultures.	15. To develop personal values through studying the past in relationship to the present and future	WC	IA II HBI
	1. Can identify those activities and institutions which constitute the social aspects of a culture.	16. To develop family values through studying the past in relationship to the present and future		WC II HBI
	2. Can describe the structure and functions that underlie social institutions.	17. To develop community values through studying the past in relationship to the present and future	WC	II HBI
	3. Can explain the reciprocal relationship between social institutions and individuals.	23. To understand one or more of the systems (political, social, economic, philosophical, religious) by which humanity is organized	WC II HBI	
	5. Can explain the implicit restraints and freedoms with in the social institutions, and can protect how degree of involvement places one in a conflicting or compatible state.	24. To describe the structures and functions that underlie social institutions		
		25. To explain the reciprocal relationship between social institutions and individuals		
		26. To identify the activities and institutions that constitute the social aspects of a culture		
		27. To explain the restraint and freedoms within social institutions		
		28. To predict how degree of involvement in social institutions places one in a conflicting or compatible state		
		30. To explain the principles of the development and change of social institutions		

Core Goals	COMP Goals	Faculty Survey Questions	Course Emphasis Major	Minor
4. To develop the ability to explore and appreciate the imaginative presentation of human experience through literary, visual, performing, and other arts	11. Can identify those activities and products which constitute the artistic/humanistic aspects of a culture 12. Can describe the elements (e.g., sensory, compositional, expressive, and substantive) that constitute artistic/humanistic activities and products. 13. Can explain the impact of artistic/humanistic expressions on individuals. 14. Can explain the development of aesthetic awareness and theory from a number of perspectives. 15. Given the characteristics of a culture, can judge which of several artistic/humanistic expressions would be most congruent with those characteristics.	34. To explore and appreciate the imaginative presentation of human experience through the arts (visual, literary, performing, and other) 35. To identify the activities and products that constitute the artistic/humanistic aspects of a culture 36. To describe the elements that constitute artistic/humanistic aspects of a culture 37. To explain the impact of artistic/humanistic expressions on individuals. 38. To explain, from a number of perspectives, the development of aesthetic awareness and theory 39. To be able to judge which of several artistic/humanistic expressions would be most congruent with given characteristics of a culture	IA	OC FW WC

Core Goals	COMP Goals	Faculty Survey Questions	Course Emphasis Major	Minor
5. To become knowledgeable about the physical and biological structure of nature, the place of humanity in the natural world, and the ethical, economic, and political dimensions of humanity's impact on the environment.	6. Can identify those activities and products which constitute the scientific/technological aspects of a culture. 7. Can describe scientific concepts, laws or principles that underlie scientific/technological activities and products. 8. Can explain the impact of technology on the natural (physical and biological) environment in which it occurs. 9. Can explain the impact of technology on the institutional and his/her culture. 10. Can predict the consequences of the introduction of technology into a culture, including considerations of the scientific principles involved and of the environmental and cultural impacts of technique. T. Can analyze the implications of decisions made on the basis of values.	40. To become knowledgeable about the physical and biological structure of nature 41. To understand the place of humanity in the natural world 42. To become knowledgeable about the ethical, economic, and political dimensions of humanity's impact on the environment 43. To identify the activities and products that constitute the scientific/technological aspects of a culture 44. To describe scientific concepts, laws, or principles 45. To explain technology's impact on physiological and biological environments 46. To explain technology's impact on the individual and his/her culture 47. To predict the environmental and cultural consequences of introducing technology into a culture	SCI SCI WC SCI	WC HBI WC HBI
6. To apply knowledge about health, nutrition, physical activity, and aesthetics to their personal lives and environments and to their communities.		48. To apply knowledge about health, nutrition, physical activity, and/or aesthetics to their lives and environments	IA HBI SCI HP	UE
7. To develop the ability to engage in effective interpersonal relationships, to understand their responsibilities in the American democratic community and in the world-wide human community, and to understand leadership roles.		20. To develop the ability to engage in effective interpersonal relationships 29. To understand one's responsibilities in the American world-wide communities 32. To understand leadership roles	OC UE WC WC	FW WC II HBI FW II HBI SCI OC II UE

Core Goals	COMP Goals	Faculty Survey Questions	Course Emphasis Major	Course Emphasis Minor
8. To develop inner resources such as imagination, a sense of wonder, self-discipline, and a habit of critical inquiry so that they may engage in lifelong, self-directed learning.		11. To develop the inner resources (e.g., imagination, self-discipline, habit of critical inquiry) necessary for life-long, self-directed learning	OC FW WC II HBI SCI	IA MA CS UE HP
9. To affirm the value of work and leisure, to become aware of the wide range of career and leisure opportunities through which they may make contributions to society and achieve personal satisfaction, and to develop the self-knowledge, the competencies, and the qualities of mind (see Goals 1-8 above) which contribute to successful employment and fruitful living.		21. To affirm the value of work and leisure		IA FW II HBI MA UE HP
		22. To become aware of the wide range of career and leisure opportunities through which one may make contributions to society and achieve personal satisfaction	UE	HBI CS
10. To become knowledgeable about the prospects for change occurring in their lifetimes and in subsequent generations so that they may be able to adapt to new conditions and to demonstrate responsible, creative leadership in shaping a changing world.	4. Can explain the principles of the development and change of social institutions. 9. Can explain the impact of technology on the institutional and his/her culture. 10. Can predict the consequences of the introduction of technology into a culture, including considerations of the scientific principles involved and of the environmental and cultural impacts of technique.	33. To become knowledgeable about the prospects for change in the near and far-distant future 30. To explain the principles of development and change of social institutions	II	WC HBI SCI CS

APPENDIX C

Number and Percent Agreement on Items Among Multiple Teachers of Same Courses
Courses Taught by Two Teachers

COURSE	RESPONSES IDENTICAL[1]		RESPONSES DIFFER BY 1[2]		RESPONSES OPPOSITE[3]		MISSING DATA	TOTAL # ITEMS
Dept #	N	%	N	%	N	%	N	N
Biol 100	31	65	17	35	0	0	-	48
Biol 101	31	65	17	35	0	0	-	48
Math 144	36	77	10	21	1	2	(1)	47
Psyc 101	23	48	21	44	4	8	-	48
Soc 230	17	52	11	33	5	15	(15)	33
Hist 102	22	67	10	30	1	3	(15)	33
PE 117	30	63	16	33	2	4	-	48
PE 128	36	75	7	15	5	10	-	48

1 Both respondents answered item with same response.
2 One respondent answered response 1 (major emphasis) and the other answered response 2 (minor emphasis), or one respondent answered response 2 (minor emphasis) and the other answered response 3 (not relevant).
3 One respondent answered response 1 (major emphasis) and the other answered response 3 (not relevant).

Number and Percent Agreement on Items Among Multiple Teachers of Same Courses
Courses Taught by Three Teachers

COURSE	RESPONSES IDENTICAL[4]		RESPONSES DIFFER BY 1[5]		RESPONSES OPPOSITE[6]		RESPONSES ALL DIFFER[7]		TOTAL # ITEMS
Dept #	N	%	N	%	N	%	N	%	N
Biol 102	29	60	13	27	6	13	0	0	48
Chem 100	26*	81*	5	16	1	3	0	0	32*
Engl 102	13	27	30	63	0	0	5	10	48
PE 123	24	50	9	19	9	19	6	12	48

4 All three respondents answered item with same response.
5 Two respondents answered with the same response, and the third answered with an adjacent response (i.e., 1-1-2, 1-2-2, 2-2-3, or 2-3-3).
6 Two respondents answered either 1 or 3 and the other answered with the opposite response (i.e., 1-1-3 or 1-3-3).
7 Each respondent answered with a different answer (ie, 1-2-3).

* For the 16 items not answered by one Chemistry teacher, both of the other teachers had identical responses on all 16 items.

Source: Rogers, Bolland, Moon, & McLean. (1986). Pilot Study of the University of Montevallo General Education Program.

APPENDIX D

Sample Tables of Faculty Responses

Total Faculty Responses Organized By Goals

Table

Goal # 2. To develop the ability to use rational processes in consideration of ideas and problems, including the ability to make judgments based upon description, analysis, and interpretation.

Item #	7	8	9	10		
Major emphasis	40	36	24	38		
Minor emphasis	13	17	24	18		
Not Relevant	8	8	13	5		
No Response						
TOTAL RESPONSES	61	61	61	61		

Items:

7. To be able to analyze problems (identify, define, select approaches)

8. To be able to select or crate solutions to problems (e.g., generate hypotheses, collect information, analyze information, evaluate probable effects of solutions)

9. To be able to evaluate problem-solving processes

10. To develop the ability to make rational judgments based on description, analysis, and interpretation of ideas and problems

Core Area Emphasis, Organized by Goal and Related Questionnaire Item

Table 4.2a

Goal 2: To develop the ability to use rational processes in consideration of ideas and problems, including the ability to make judgments based upon description, analysis, and interpretation.

Item 7: To be able to analyze problems (identify, define, select approaches)

Response	Courses from Core Area											
	IA	OC	FW	WL	WC	II	HBI	SCI	MA	CS	UE	HP
Major Emphasis		1	4		1	6	2	9	2	1		14
Minor Emphasis			2		1	3		3		2	1	1
Not Relevant	1											7
No Response												
TOTAL RESPONSES	1	1	6		2	9	2	12	2	3	1	22

Core Area Emphasis, Organized by Goal and Related Questionnaire Item

Table 4.2b

Goal 2: To develop the ability to use rational processes in consideration of ideas and problems, including the ability to make judgments based upon description, analysis, and interpretation.

Item 8: To be able to select or crate solutions to problems (e.g., generate hypotheses, collect information, analyze information, evaluate probable effects of solutions)

Response	Courses from Core Area											
	IA	OC	FW	WL	WC	II	HBI	SCI	MA	CS	UE	HP
Major Emphasis		1	6			5	1	7	2	1		13
Minor Emphasis					2	4	1	5		2		3
Not Relevant	1										1	6
No Response												
TOTAL RESPONSES	1	1	6		2	9	2	12	2	3	1	22

Core Area Emphasis, Organized by Goal and Related Questionnaire Item

Table 4.2c

Goal 2: To develop the ability to use rational processes in consideration of ideas and problems, including the ability to make judgments based upon description, analysis, and interpretation.

Item 9: To be able to evaluate problem-solving processes

Response	Courses from Core Area											
	IA	OC	FW	WL	WC	II	HBI	SCI	MA	CS	UE	HP
Major Emphasis		1	4		1	1	1	6	2			8
Minor Emphasis			2			8	1	3		3		7
Not Relevant	1				1			3			1	7
No Response												
TOTAL RESPONSES	1	1	6		2	9	2	12	2	3	1	22

Core Area Emphasis, Organized by Goal and Related Questionnaire Item

Table 4.2d

Goal 2: To develop the ability to use rational processes in consideration of ideas and problems, including the ability to make judgments based upon description, analysis, and interpretation.

Item 10: To develop the ability to make rational judgments based on description, analysis, and interpretation of ideas and problems

Response	Courses from Core Area											
	IA	OC	FW	WL	WC	II	HBI	SCI	MA	CS	UE	HP
Major Emphasis	1	1	6		1	2	1	11	2	1		12
Minor Emphasis					1	7	1	1		1	1	6
Not Relevant										1		4
No Response												
TOTAL RESPONSES	1	1	6		2	9	2	12	2	3	1	22

Faculty Responses for Specific Courses Within Core Areas, Organized by Goals

Institutions and Issues

Table 6.2

Goal 2: To develop the ability to use rational processes in consideration of ideas and problems, including the ability to make judgments based upon description, analysis, and interpretation.

Item 7: To be able to analyze problems (identify, define, select approaches)

Response	ANTH 320	SOC 230	SOC 240	SOC 331	SW 130	SW 330	HEC 402	ECON 231
Major emphasis		1	1	1		1	1	1
Minor emphasis	1	1			1			
Not Relevant								
No Response								
TOTAL RESPONSES	1	2	1	1	1	1	1	1

Item 8: To be able to select or crate solutions to problems (e.g., generate hypotheses, collect information, analyze information, evaluate probable effects of solutions)

Response	ANTH 320	SOC 230	SOC 240	SOC 331	SW 130	SW 330	HEC 402	ECON 231
Major emphasis		1	1	1		1	1	
Minor emphasis	1	1			1			1
Not Relevant								
No Response								
TOTAL RESPONSES	1	2	1	1	1	1	1	1

Faculty Responses for Specific Courses Within Core Areas, Organized by Goals

Institutions and Issues

Table 6.2 (cont'd)

Item 9: To be able to evaluate problem-solving processes

Response	ANTH 320	SOC 230	SOC 240	SOC 331	SW 130	SW 330	HEC 402	ECON 231
Major emphasis						1		
Minor emphasis	1	2	1	1	1		1	1
Not Relevant								
No Response								
TOTAL RESPONSES	1	2	1	1	1	1	1	1

Item 10: To develop the ability to make rational judgments based on description, analysis, and interpretation of ideas and problems

Response	ANTH 320	SOC 230	SOC 240	SOC 331	SW 130	SW 330	HEC 402	ECON 231
Major emphasis						1	1	
Minor emphasis	1	2	1	1	1			1
Not Relevant								
No Response								
TOTAL RESPONSES	1	2	1	1	1	1	1	1